DOCUMENT RESUME

ED 036 969 EF 000 188

TITLE	Planning for Elementary Schools.
INSTITUTION	Stanford Univ., Calif. School Planning Lab.
SPONS AGENCY	Educational Facilities Labs., Inc., New York, N.Y.; Stanford Univ., Calif. School Planning Lab.
PUB DATE	65
NOTE	35p.; Speeches given at the Annual School Planning Institute (15th, Stanford University, July 1965)
EDRS PRICE	EDRS Price MF-$0.25 HC-$1.85
DESCRIPTORS	Educational Planning, *Elementary Schools, *Flexible Facilities, *School Buildings, *School Design, School Districts, *School Planning, Team Teaching

ABSTRACT

Resumes are presented of major speeches concerning the responsibilities of educators, administrators, and architects to elementary school planning. The content includes discussions on team teaching, individualized instruction, independent learning, flexible facilities, changing pattern of population prediction, reorganization of school districts, a new educational dimension, and team approach to school planning, all in relation to school facilities problems. (FS)

PLANNING FOR ELEMENTARY SCHOOLS

EF 000 188
ED036969

SPL / EFL

Elementary School Planning Institute
Stanford University Summer, 1965

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ED036969

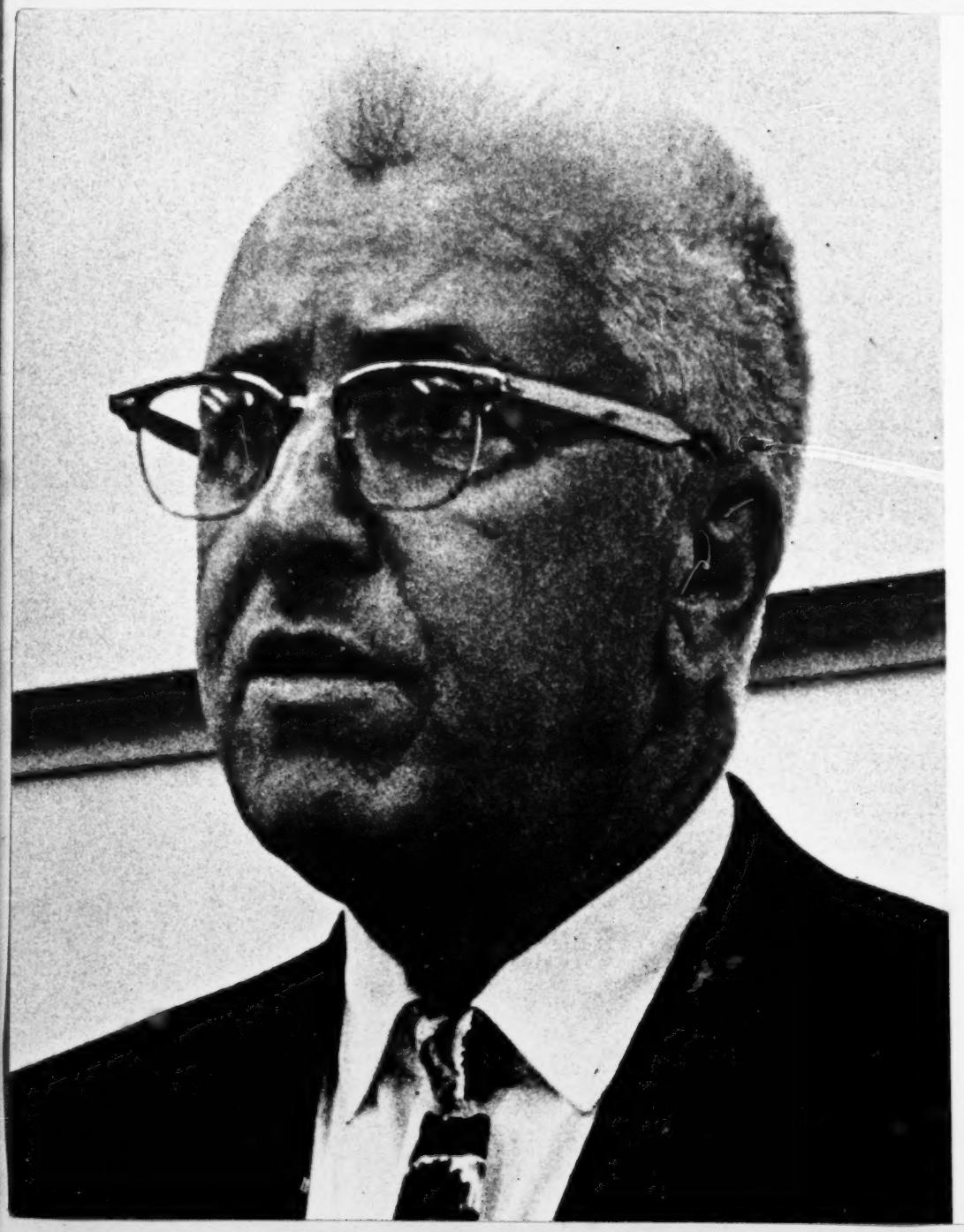
PLANNING FOR ELEMENTARY SCHOOLS

The Fifteenth Annual School Planning Institute, held at Stanford University in July 1965, was sponsored by the School Planning Laboratory for the purpose of exploring new trends in elementary school design and examining existing planning programs.

One hundred fifty participants were treated to a varied program during the five-day conference. Among the highlights of the week were visits to four outstanding elementary schools —representative examples of new trends in open-school design—where the staff of each school explained the educational program and its relationship to the flexible design of that particular school.

In addition to the four schools, a tour of the School Construction Systems Development (SCSD) mock-up building gave the participants an opportunity to examine an integrated building components system especially designed for educational facilities.

However, the heart of any conference lies in the speakers' presentations. Hopefully, this booklet provides a cross-section of the opinions expressed during the week. It offers no solutions, nor is it a comprehensive report of the week's activities. Instead, it presents some alternatives to planning, school design, and problem solving which have been arrived at by a diverse group of people working on a diverse group of school facilities problems.



FOREWORD

During the past decade, change in the educational environment has paralleled the technological changes in our society. Better building materials, computerized school scheduling, and the increased use of electronic teaching aids are but a few of the scientific developments which have given a new shape to school facilities and a new direction to the educational process. A variety of building components and school equipment educators have dreamed of for many years are available today—from prefabricated roof trusses to portable television systems—and at a cost compatible with school budgets.

In future years, the educational system must grow at a rate parallel to the economic, cultural, and technical demands of our society. Federal and state legislators, within the past few years, have recognized the educational implications of such diverse problems as the population boom, the increasing trend toward occupational specialization, and of the right of equal opportunity and have provided more public funds to aid in these areas. It now remains for educators to develop adequate, imaginative programs which will solve these problems.

But the innovative ideas and techniques which may help us solve the problems we are facing are often lost amid the shuffle of everyday routine and traditional school planning procedures. When innovation comes too late, it must overcome rigid facilities and backward programs that can cramp educational growth for generations. We, the educators, are the alleged masters of the art of communicating knowledge, but we fail too often to develop this art among ourselves. It is to serve this purpose of communication that the School Planning Laboratory and the Educational Facilities Laboratories sponsor an annual school planning institute. These conferences provide educators, architects, and school planners an opportunity to meet, exchange ideas, and develop a broader understanding of the changes taking place in education and educational facilities planning throughout the nation.

James D. MacConnell, Director
School Planning Laboratory

EDUCATORS

Harold B. Gores, President
Educational Facilities Laboratories, Inc.
New York

California is where the action is. There are, of course, scattered school districts across the country which are embarking on building programs that are imaginative and futuristic, but there aren't very many of them. In California, however, it seems that everywhere one looks, there is a new idea, a new concept taking shape in school construction.

Educational facilities trends in California are only an indication of the direction American education will take in the future. Education in the 60's and in decades to come is going to be the economy's prime mover. In the past, our economy has been upheld by government projects in the 30's, wartime production in the 40's, and automobiles in the 50's. Although it may not appear to be true at this time, there is a limit to the number of automobiles which can be produced; there simply is not enough space for them. Education, however, is something that everyone wants and everyone needs, and it takes a lot of people to produce it.

Our aim at EFL is to promote and finance research studies which will benefit the future of our educational system in any reasonable way. Some of the projects we have backed may seem far-fetched and outlandish, but we are in business to take risks and supply funds for ideas which no one else wants to support. We have been asked to help design and construct every kind of facility, including air frozen hockey rinks, divisible auditoriums, rooftop playgrounds in urban areas, semi-enclosed physical education shelters, artificial turf for playground surfaces, and geodesic-domed field houses.

We are seeing new developments in the field of educational facilities which will far surpass anything done in the past. More and more school districts are viewing school costs with greater perspective. On operating costs alone, a school rebuys itself once every four years. When one looks at a school from this perspective, the importance of planning becomes clear. Too many schools have been built in the past without proper planning and have remained to plague future generations and prevent their full educational growth.

For example, in the past, comfort has been a matter of guilt. But today, we are seeing more schools which provide an environment that draws the child toward more responsible behavior. We are seeing an increase in the use of materials which are soft to the touch and pleasing to the eye. For team teaching, generalized school space can be made special by portable equipment—leaving things to teach facts and teachers to teach values. The indestructible eggcrates of the past are finally disappearing.

Dr. Fannie B. Shaftel
Associate Professor of Education
Stanford University

During the past few years, we have suddenly become aware of the amount of knowledge available to us, of the rapidity with which it changes, and of society's demands for highly technical information. Direct pressure has been placed upon our schools, extending down to the elementary levels, to produce people who can fill the needs of a technological society. This, in turn, has placed great pressure on the children. Every year we see an increasing number of students dropping out of high schools and colleges because the pressures of intense competition and of intense scholastic requirements have not allowed them time to form their own values and think of the direction they are taking. This situation applies to those whose backgrounds reflect and harmonize with the values of our society. But I would like to talk for a moment about the children who do not have a middle-class background.

When we think of this, one of the things that quickly becomes clear is that the elementary schools have not understood children who do not meet the middle-class standards of their teachers. Teachers have not known how to connect with the positive experiences underprivileged children bring to school. We have structured these children according to the middle-class background which exists within a framework of certain kinds of experiences. Teachers have not looked at these children according to the strengths they possess and have not tried to develop the positive factors.

One of the problems during the last thirty or forty years has been that we have been working under a psychology which is corrective rather than developmental. Now, with rural people moving into urban areas where there is a concentration of low income people whose jobs and skills are disappearing, our schools are going to face even greater pressures.

The sense of alienation that comes from uprooting people from old ways and traditions is, in part, caused by the experiences these people meet in our schools. A startling fact is that 30 to 50 percent of school children are culturally deprived. These children live dis-

organized lives and need very much to learn how to become social beings. They need to be taught systematically how to relate to one another. They need to be able to work out tensions and problems within a cohesive group—a group in which individuals will like and respond to one another. This does not happen if the school day is so fragmented that the children cannot relate to a group and develop concern for its members. They need continuity. They need to build day by day upon the experiences they bring from their own environment. They come from backgrounds which do not afford them enough rest or enough food. The motion involved in the team teaching program is intolerable to them. The team which is responsible for these children must ask questions concerning the continuity and sequence of a teaching program that will help deprived children acclimate themselves. We can attempt to change them, or we can try to develop them according to their own system of values.

In team teaching, we have grouped and regrouped children, but essentially, we manipulate them as before. The open-school plan, with flexible scheduling, has not had the success we expected from it because, basically, we have stayed with the pattern of one teacher to thirty students. We continue to use antiquated teaching methods. We teach facts—systems of knowledge—instead of ways of training which might help children make sense of the world as they see it. The problem here is to de-center, to break old concepts concerning the ways in which we look at children and the ways in which we manipulate them.

G. Wesley Sowards
Associate Professor of Education
Stanford University

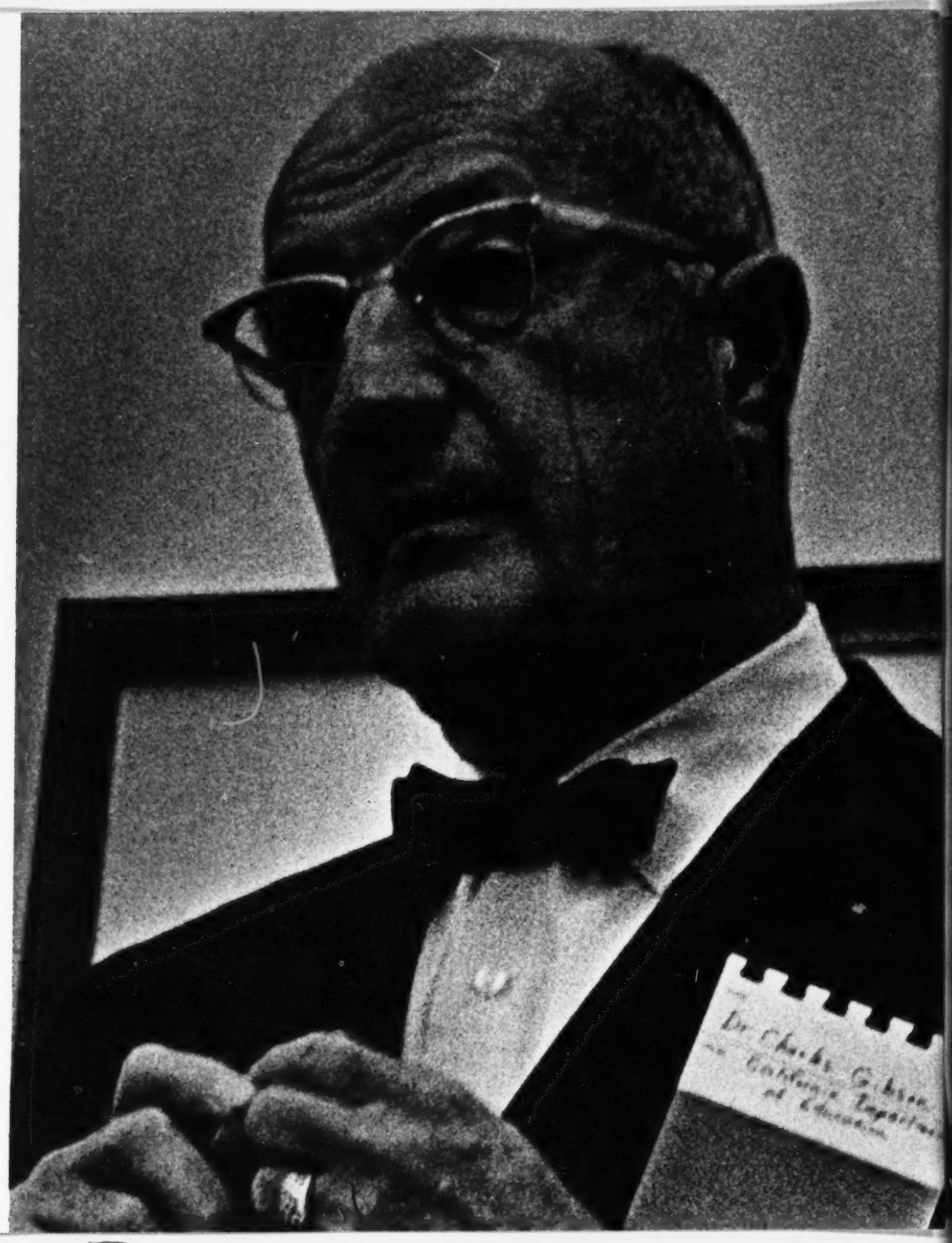
The past decade has been a decade of innovation. Innovation started in the secondary schools, developed there, and began to extend downward to the elementary levels. The primary cause for the rapid changes of the past ten years has been the development of new teaching methods and the resultant reorganization of traditional school spaces to accommodate them. Within this broad framework, there have been three major areas of innovation. They are: (1) content innovation, (2) organizational or structural innovation, and (3) facility innovation. In content, or subject matter, there has not been a great deal of change on the elementary level. In the second area, that of structural or organizational innovation, great theoretical changes have occurred, and, in practice, where team teaching has been carefully conceived and properly executed, it has been very successful. However, it is the area of facility development which has progressed at an amazing rate. We have seen structures constructed which were unknown and scarcely dreamed of fifteen years ago being built in unheard of places.

However, it is in the area of our greatest success where the greatest danger lies. Educators have become facility oriented and not program oriented. I do not mean to belittle the progress achieved by school planners and forward looking architects and administrators; on the contrary, they have done a tremendous job. It has been the curriculum people, like myself, who have failed to develop programs which lead, rather than follow, the direction of facility innovation.

The Aristotelian law is that form follows function. We seem to have forgotten this. In order to plan and design better and more effective schools, curriculum programmers must begin to give facility planners more information about the success or failure of their programs other than the usual "it seems to be working out all right." Curriculum planners must specify what kinds of programs are desirable, how they can be implemented, and how the success of the program can be evaluated. The key word, then, is evaluation, whether

in planning or in execution. We have worked too long under the assumption that curriculum developments were not hypotheses to be tested, but were already in the bag.

ADMINISTRATORS



Paul Avery
Superintendent
Winnetka, Illinois

Since 1940, the time of the completion of Winnetka's youngest elementary school, we have continued to refine and extend our notions of individual progress. In the late fifties it became apparent that an extra dimension in plant facilities was greatly needed. Two basic obligations had grown out of the philosophy of instruction in the Winnetka school system. These were: (1) to provide individualized instruction for all students, and (2) to provide opportunities for continuous educational experimentation. One of the ultimate objectives of individualized instruction was to motivate children to engage in self-education beyond the confines of the classroom. This objective was impossible to achieve without a place to carry on out-of-class study activities under proper guidance and with many instructional resources.

With this concern in mind, a new wing was added to the Skokie Junior High School, which opened in October 1963. The central core of this wing housed what is now referred to as the learning laboratory.

What began as the germ of an idea to provide one additional facet to a many-faceted program, within two years, became the heartbeat of the school. More significantly, the concept of the learning laboratory permeated the entire school system. Learning laboratory outposts have now been established in each elementary school as well as the junior high, and although much experimentation and adaptation will be necessary to design a learning laboratory for primary and intermediate grades, the prognosis is excellent.

The development of the concept of the learning laboratory within the K-5 schools will take on a somewhat different form from the laboratory at the junior high level. Primary children, by and large, have not demonstrated capability for extended periods of independent study. However, they are capable of pursuing interest areas in the most diligent manner under close guidance. Certain 4th and 5th graders, however, have exhibited a definite potential for independent study programs. Design and approach for elementary learn-

ing laboratories will not be the same as our project at the junior high level, yet the goals and objectives will in many respects be similar.

Today, twenty-five years after the completion of our youngest school, Winnetka is planning a new elementary school with a tentative completion date set for September 1968. Many of the features of our youngest school will be incorporated into our new school. They include:

Lavatories within classrooms, which permits us to regard lavatory use as a normal and unselfconscious experience and avoids constant exits and entrances to and from the classroom.

Conference rooms and offices suited for the specialist personnel. We have found that the status of specialists (psychologists, consultants, music teachers, etc.) and the services they are able to render to the children are enhanced by having quarters which are designed for their exclusive use.

The use of wall space for display materials.

Nothing is so sacred that it cannot be spared a thumbtack in order to display the work that some child has completed.

Exterior exits leading from each classroom into a small patio. This not only reduces safety hazards, it increases the attractiveness and utility of the classrooms by extending work out-of-doors.

Since Winnetka is a school system that seems to require a new school only once every twenty-five years, the educational planning of such a school is of great significance and consequence to us. As we have also enjoyed a reputation for being an experimental school district, we are very conscious of our need to design a school that will stand the test of research and development in elementary education. At this point in time, this is Winnetka's way of adapting to change—by building on the bases of experience and research which has been successful within our system, and discarding that which appears least successful.

A. Maurice Capson
Supervisor, School Facilities
Granite School District, Utah

Any statement of educational purposes must be sufficiently precise to escape ambiguity, sufficiently realizable to escape impracticality, and sufficiently ideal to be different from what is. The children we are educating now will spend part of their lives in the twenty-first century, and their educational experience now must prepare them for intelligent living then. There are four trends discernible today which are likely to be present in the future and which have important implications for educational purposes.

Independent learning: More time will be spent in formal education, for both children and adults, including more on-the-job workshops. Each student must be encouraged to develop a desire for continual learning, since the expression of a child's imagination is equally as important as the development of his memory.

Intelligent decision making: Increased growth of mechanization, automation, and the influence of large organizations will increase the pressures for uniformity and alienation, but will also give people greater affluence and more leisure time. To live intelligently in such a world, students need to be encouraged to develop a sense of independent judgment. They should be given the knowledge and opportunity to develop a set of values which can help them make reasonable decisions.

Social interrelatedness: The increased interdependence of people in the world will result from increased travel opportunities, communication, and technology. Knowledge of our own history, culture, and problems must be supplemented by knowledge of others' language, cultural achievements, history, and problems.

Meaningful knowledge: Knowledge will continue to proliferate and there will be a greater need for information which will help

us to live intelligently. The traditional belief that a student should memorize facts which teachers disseminate will become increasingly archaic. The teaching process must become less concerned with definitions, facts, and memorizing, and more concerned with self-discovery, imagination, and creativity.

Considering the generally accepted idea that only when the curriculum and its purposes are clearly conceived can the appropriate school organization be developed or adopted, it may appear that the Granite School District has its cart a little ahead of its horse in adopting its new design for a school structure which presupposes change in curriculum and teaching processes. Although a new statement of its principles and program is still being evolved, the horse (school organization) already has a pretty good sense of the direction it will take, and in a fast-growing district such as ours—the largest in Utah—it behooves us to have a cart (school plant) that is ready, and of the most advanced design, by the time the horse is ready. We believe our cart of new design is flexible enough to a
commodate whatever teaching processes are adopte
and that our plans for the new cart will spur on t
grooming of the horse, so that both will be ready
the same time to carry our program toward our goal

Leland B. Newcomer
Superintendent
Clark County, Nevada

There is a revolution coming in education, and the sooner the better. It is being brought about by social and economic changes outside the educational structure. More people are demanding an education which will benefit them in their search for better jobs and a better life. They are demanding an education which will equip them to adapt to the changing needs of a technocratic society in which nearly every person will undergo job retraining several times in his adult life.

We in education must be prepared to meet the challenge presented by the revolution taking place in our society. We must have a plan of action which will accommodate the necessary changes in teaching methods, building design, and educational supervision. Today I wish to talk about one facet of a plan we have adopted in Clark County, Nevada—that is, the method by which we attempt to define roles and responsibilities in school operation and school planning involving architects, teachers, principals, school board members, and district administration staff.

In attempting to solve a problem, the first thing we do is assess the scope and nature of the problem and evaluate our resources. Simply, we shinny up the flagpole and look around. What do we have? In varying quantities, we have people, resources, and time and space. The question is, how do we mix them together?

It is the responsibility of the central administration and the school board of any district to establish its own district-wide educational goals, and it is the responsibility of the principal and teachers in each school to determine how they can best go about achieving them —how they can implement a program which will fulfill the obligations put to them. But before you can begin a new program, you must establish some means of evaluating the results; then, and only then, should the teachers and principals be allowed to estimate how they propose to establish programs to implement these goals.

Strangely enough, it is the large school districts which have the most regulation over teaching prac-

tices, yet they are the districts with the least knowledge of exactly what goes on in the individual school. They often prescribe how learning should come about, usually with disastrous results. In Clark County we have many programs. We have been forced by a quickly expanding local economy to revamp old programs and to initiate plans for new facilities. It is both impossible and undesirable for the central administration to maintain an authoritarian rein over all the various programs going on at the present time. We hope that we have the personnel to carry out the ideas that they themselves have initiated. We operate on the assumption that internalized responsibility will lead to better teaching, and that teachers and principals will function better if they are working on a project or an idea they themselves initiated. We do not yet know whether this will work, but the early results seem to indicate that we are on the right track.

In contrasting the planning roles of large and small districts, there is one area that seems to deserve special attention. It is what I call the myth of democratic school planning. When teachers are allowed to plan, or assist in the planning of schools, there is no doubt in my mind that a good school will be built, but it will be a school that is functional only for the type of teaching that the teacher-planners use in their own classrooms. Teachers are method-oriented. We can ill afford to build a school that fits the specifications of one system of teaching to the detraction of other techniques which may later be used in the school. This is the era of the school planning specialist. He is needed most by the small districts which rely too much on teacher advice and do not have planning personnel of their own.

The revolution I spoke of earlier is forcing the educational process into changing its emphasis from teaching to learning. We are discovering that education is a continuous process, that there are no "methods" which insure success, and that the school plant and the school districts must be designed to operate with these ideas in mind.

Charles D. Gibson, Chief
California Bureau of School Planning
Sacramento

A look backward into the past reveals the fact that elementary education has not lacked for admirable goals. In March 1954, the Association for Supervision and Curriculum Development published a document titled *Creating a Good Environment for Learning*. In that publication, Dr. Norman Wampler set forth the following as desirable elementary education concepts.

> The school must share the responsibility for the total growth of the child.
>
> The school should use a multisensory approach to learning.
>
> The school must avoid grade-level expectancies for children.
>
> The school should offer considerable opportunity for pupil choice in the learning process.
>
> The school must recognize that learning is facilitated by pupils actively participating in the process.

These concepts as general educational objectives are hard to quarrel with. Yet in 1954 they were timeworn goals. If we looked much farther back in the past, the same concepts would be found filling thumbmarked pages of literature, but finding relatively little fruition in the classrooms of our country.

With the overall lack of success we have had in reaching these goals, how can we be optimistic about the future? The answer to this question can be found in an analysis of Gibson's Fifth Law as it relates to this situation. Gibson's Fifth Law states, "Progress in the field of education comes *only* out of crisis."

In order to find the basis for my optimistic outlook for the future of educational progress, we have only to describe several of the many crises that now beset us.

No attempt will be made to place them in any priority sequence.

CRISIS 1—THE CHANGING PATTERN OF POPULATION PREDICTION OR THE FATE OF THE SINGLE-FAMILY RESIDENCE

Once upon a time enlightened school officials and school planners believed they were anticipating saturation population figures by rather elaborate master plan studies of school district land use zoning. All the area falling within district boundaries was charted to reflect its ultimate utilization. But such unforeseen factors as rezoning, multistory apartments, and shifting land values began producing three and four students from the same building lot that had produced one before.

CRISIS 2—REORGANIZATION OF SCHOOL DISTRICTS

California's unrealistic school district pattern based on elementary school districts superimposed on high school districts, which, in turn, were superimposed on junior college districts, never would have been corrected by educators for all its educational weaknesses. It remained again for crisis, real or imagined, in the minds of budget-conscious legislators to bring about change.

CRISIS 3—STEPPED-UP DISCOVERY

This crisis revolves about the problem of how to organize instruction processes so that school programs can have a remote chance of staying within shouting distance of available knowledge. The personal retooling requirements now forced upon most skilled workers as well as teachers has challenging implications for our relatively horse-and-buggy approach to learning.

CRISIS 4—RECOGNITION OF A NEW EDUCATIONAL DIMENSION

The greatly improved art and science of school facilities planning is beginning to produce educational housing that leads rather

than follows program needs. The crisis is created by the need of educational programs to catch up with the potentials of educational housing.

CRISIS 5—MONEY TO SPEND—
PEOPLE TO HIRE

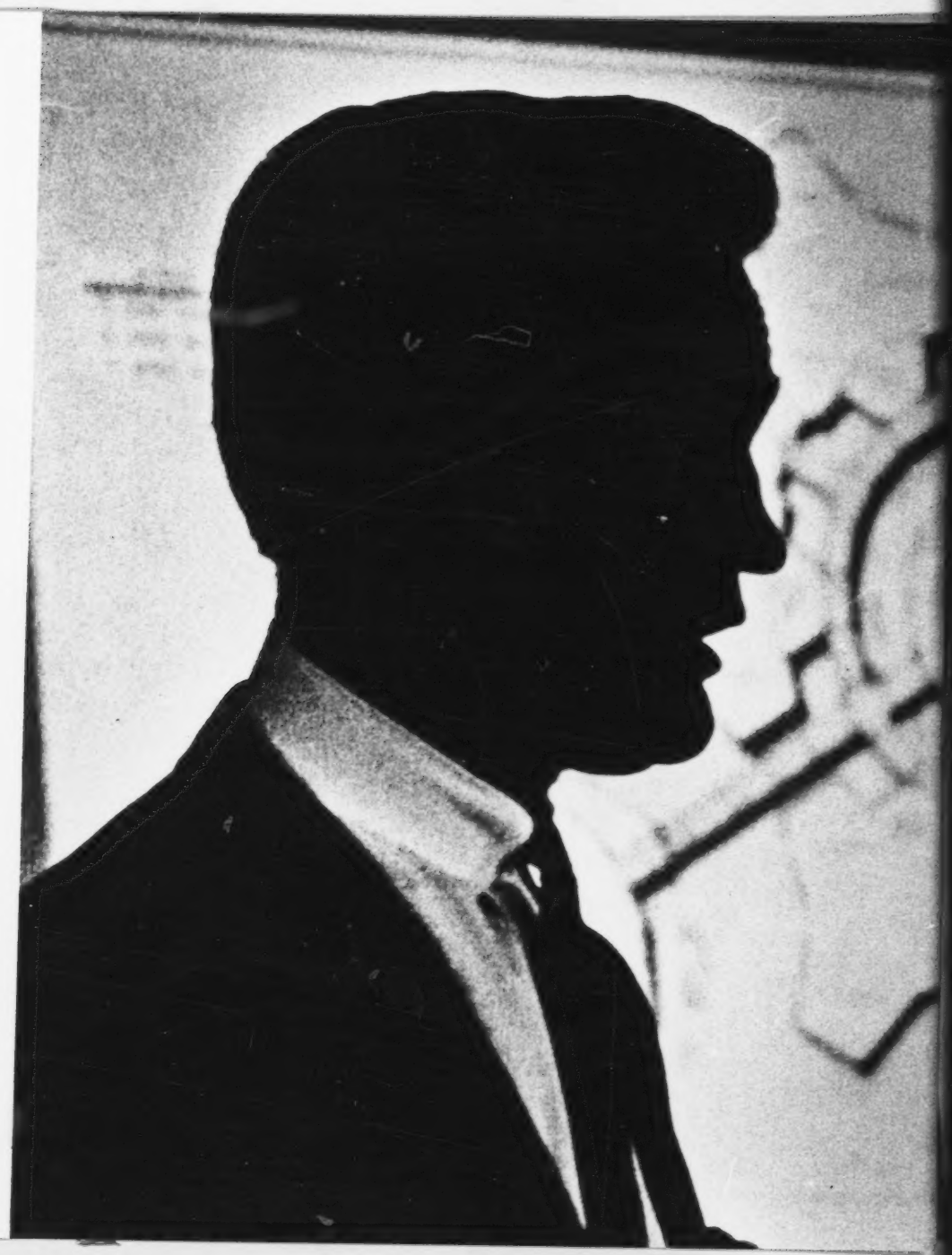
Educational programs have been limping along for so long on bare bones budgets that the sudden realization that Federal support will be available soon in the form of sizable chunks of money for various programs sets a new crisis course.

Before we throw off the seventh veil and reveal the future, I want it understood that I am proud to have been an active part of the past and present educational scene. Although we did not reach our goals, I believe that those of us who struggled toward the educational concepts that were sound, both then and now, were matured and strengthened by our trying. We should be better analysts because of our failures. However, we must retain many of the goals and processes we have developed to date. We must add our most candid analysis of why we failed to achieve many of our objectives.

One of the hardest things for educators to do is to discard an idea or a thing. Since our educational beginnings we have copied and added. Rarely have we thrown anything away. Even when enamored with a concept, we seldom treat it as an entity in its own right. Rather, we prod and push and scheme to see how we can fit it into the status quo. To date we have played with concepts such as the ungraded school, but for the most part we have tried to apply it within the straightjacket of traditional classroom patterns and a methodology based on one teacher and thirty-five students. When our traditional approaches failed, we abandoned the new concept rather than modify either our methodology or space organization. In other words, no fit—no go.

Great things have been happening to improve the effectiveness of schools throughout our nation. They represent the "growing edges" of educational progress. They are encouraging. If, however, we expect to make a general breakthrough along the whole entrenched line of elementary education, we must have more than "growing edges."

ARCHITECTS



Roy H. Seifert
Landscape Architect
San Diego

During the past 30 to 35 years, the landscape architect has had a relatively minor role in basic planning decisions. However, the disappearance of open spaces and the scarcity of land within our communities today make it imperative to utilize the services of qualified landscape architects. This is the logical step to turn the tide of ugly land development. Where else would it be more fitting to establish a high quality of achievement in land development than in school planning?

What is the role of the landscape architect? He is quite often site planner, land planner, recreation and park planner, and/or subdivision designer. In school site development, the landscape architect's objective is to stimulate the inquisitive nature of students and help them to explore for knowledge in many directions. Outdoor areas traditionally have been used primarily for physical development programs and the practice of sportsmanship among students. Our program for the use of outdoor space is the further refinement of specific areas as they relate to classroom academic facilities. The areas we envision would be outdoor educational spaces complementary to indoor educational areas. In effect, what we propose is the efficient, total, and economic use of all available school assets.

School buildings and grounds are successful to the degree that they provide space and facilities for the learning process. Landscape architects can contribute to creative school development by rendering services in the areas of site selection, educational specifications, site layout, construction technique, and overall school site development.

It is particularly important that schools fit the sites for which they are planned with a minimum of grade alteration and destruction of native plant material which destroys the natural landscape character of the site and alienates the school from the adjoining community.

The only way to insure that building and land design will work together to provide a functionally useful and aesthetically pleasing finished development is

to secure a landscape architectural master plan, prepared through early collaboration of the architect and a landscape architect. Aesthetic design judgment is just as important as the use of proper engineering construction principles.

Following the preparation and acceptance of a master plan, the landscape architect is qualified to prepare detailed working drawings and specifications illustrating the precise land grading and drainage requirements; the layout of playground equipment, outdoor playing fields, walkways, classrooms, courtyards, and parking areas; and the lawns, shrubs, and trees needed to produce an attractive park-like school development.

It is important that those associated with school site development understand and properly respect the educational specifications and policies the planned development must accommodate. Creative landscape architects will actually contribute to the development and refinement of educational specifications as they relate to specific site developments. In effect, we might turn a liability into an asset. For example, underground drainage is expensive and surface drainage is space-consuming. But if the drainage swale is developed into a natural landscape feature and incorporated into the educational specifications, we then have total, efficient site utilization.

What is more conducive to the educational experience than a comfortable and beautiful environment? Beauty is not something that can be applied after a development is otherwise complete. Building design, layout of land areas, and selection of trees and shrubs must all contribute to making the environment a pleasant place to be as well as to fulfilling necessary functional needs.

John Shaver
Architect
Salina, Kansas

Planning for schools is an organic process. It involves the coordinated effort of many people—acoustical engineers, dieticians, psychologists, lighting and heating experts, and many more. Within this process there must be a chain of command, and it is the architect, more than any other person, who is responsible for interpreting and implementing the suggestions of the many consulting specialists. Working with him at the top of the chain is the school administrator.

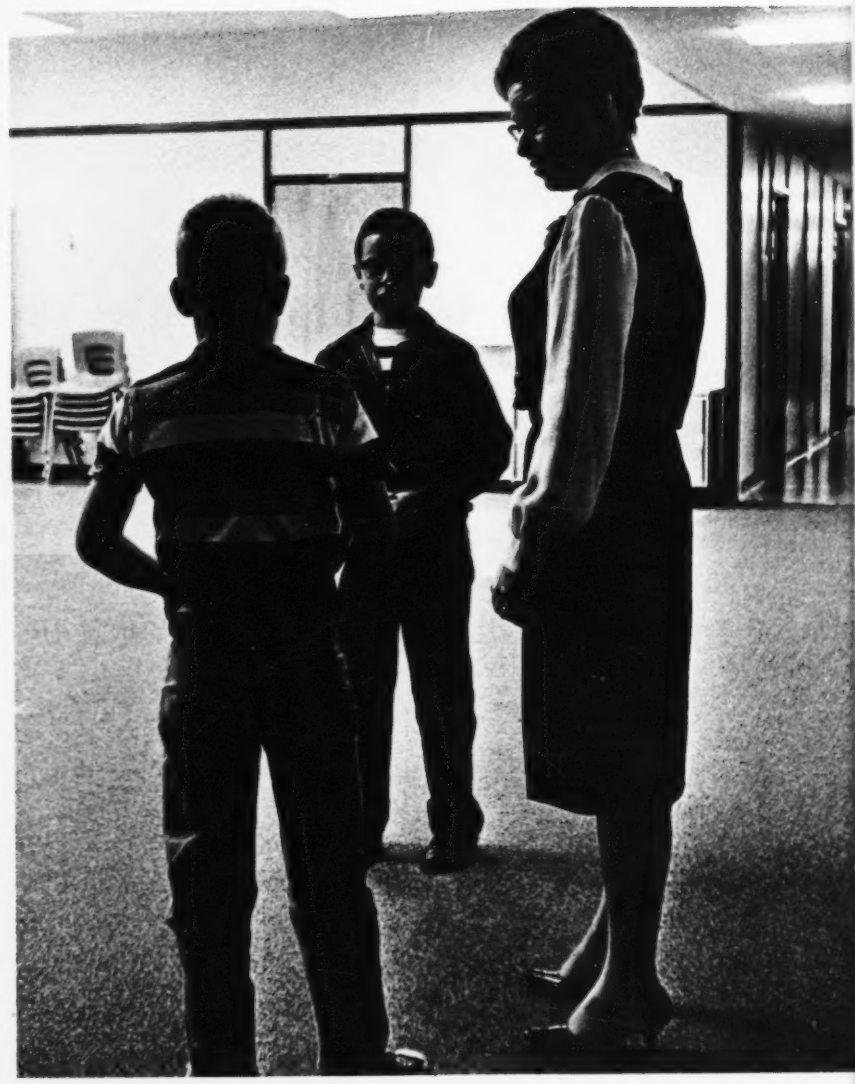
One of the primary objectives of planning, whether it is for a single school or for the schools to be built well into the future, is to eliminate all the preconceived notions and ideas which they have accumulated over the years.

I think we are moving into a new era of school facilities innovation. One of the things which has helped us to eliminate some of our cherished ideas about school design has been the work which has been done concerning the effects of environment on the child and his emotional response to it. We know that learning involves more than what teachers and books can give—it involves all the senses. Learning is experiencing motion, color, light, temperature, and touch. The school building should be more than an educational tool for teachers; it should be an educational experience in itself. For example, lighting should be a combination of artificial and natural sources. Color should be used to stimulate emotional responses in children and to provide a pleasant atmosphere for studying. Wall surfaces, floors, furniture, and other accessories should not be emotionally sterile and antiseptic; rather, they should be warm, soft, and pleasing to the touch.

In present school design, we are slowly moving toward this new kind of learning environment, yet we still make many mistakes. In the use of exterior space, many schools have been planned and sites selected in potentially beautiful settings, only to have streams and ponds on the school's grounds dozed and filled before the school is constructed. We have too long ignored the potentialities of using natural solutions for prob-

lems posed by nature. Water resources, if they exist on the school site and are properly exploited, can provide an aesthetically pleasing addition to the school environment. Small ponds and streams can be created artificially to set between and set off a cluster of buildings.

All of this should serve one purpose: the school should be a place where the child could learn something if he were alone inside the building. It should serve to heighten his emotional responses and begin to help create an emotional or aesthetic sense of wonder, and perhaps, judgment, within him.



Ezra Ehrenkrantz
SCSD Project Architect
Stanford University

When we review the history of architecture, we tend to look at buildings like small boys looking at the cherries in the fruitcake. We look at those buildings which were designed as monuments and were built to last a long time. They represent a culture's religious or political aspirations and achievements and are one of the chief expressions of it. However, the matrix of the fruitcake—not the monumental or symbolic architecture, but the buildings used by people—tend to be razed or renovated as the needs of the society change. This cycle of removal and reconstruction is much faster today.

In a sense, the removal and reconstruction of buildings is a form of flexibility. If a tire salesman or furniture dealer wants to move to a larger or smaller building, he can simply pack up and leave, but in the school the opportunity for mobility does not exist. A school, designed for a specific purpose, is also built to last. Too often it lasts well beyond its usefulness. For this reason we must design to accommodate the change which will take place within it.

Before we had the ability to develop a sophisticated building, it was easy to induce a favorable environment through the addition of extra space. Old houses, with their high ceilings and huge entryways and hallways, possessed a certain charm with this extra space. Today costs prohibit this. Architects must design for specific requirements. Fortunately, with the development of new building materials and with a better, but by no means comprehensive, understanding of the learning process, we are more readily able to design for specific functions.

When we design buildings that are not symbols but are for human use, we must know what kind of activities are going to take place within them. Too many schools have been and are being constructed which have no relation to the programs they will house. In many cases, they cramp and confine the development of adequate teaching programs, while in other cases, flexible facilities have been designed and constructed

only to remain unused because educators have failed to define their educational programs and to plan for the changes expected to take place over the years.

It is clear, too, that architects must share the blame. We have not learned the lessons of the past. We often do not see the necessity for everyday useful architecture, where social function is the primary function. Because a school is a relatively large public structure, we sometimes tend to envision it as a monument—a building which will be unique for all time—without considering the potential use and reuse which must take place within its walls. The need is for flexible facilities which allow the people using the building to act upon it, to influence the environment, and to use the space to *their* best advantage.

Clair Eatough, Senior Architect
California Bureau of School Planning
Sacramento

There is a common misconception that many school districts, especially the large growing districts, have adequate and experienced planning personnel. In reality, there are only a few which possess an experienced technical school planning staff. These are generally the large city districts such as Los Angeles and San Diego. This lack of local resource people presents a major obstacle to the districts, which are responsible for public monies and and unhoused enrollment. Service from outside the local district is required. Districts must supplement their own resources by leaning heavily on outside consultants and on the literature available from various professional organizations or free-lance experts.

Serious thinking about education and its relationship to school construction seldom develops internally. This fact is dramatically revealed when the educational goals and philosophy formulated by the district in educational specifications are not initiated when the buildings are implemented. The apology is made that "we are not ready to change, but we surely will some day." Meanwhile, the building designs have been so compromised that the program for "some day" cannot happen at all.

The problems relating to school planning can only be solved by the team approach wherein the participants with specialized backgrounds and knowledge contribute toward the analysis of building needs and solutions. The State Bureau of Planning consultant should be a key member of the planning team, not because he has the legal power to give or refuse approval for school plans, but because he has something to contribute based on his overview of school planning with many clients on a day-to-day basis and involving varied programs and problems. Much of his work is to guide, inform, and sometimes to resolve conflicts regarding problems having to do with site selection, bonding, programming, curriculum analysis, and so forth, and to assist in determining what the facilities are to be and what they shall do. He works

under the philosophy that freedom allowed the designer will achieve more than restrictive standards in school design, and he believes that the democratic system has a capacity to correct its own excesses. The final test of a planning consultant is simply his ability to encourage the raising of low standards on the one hand, and to prevent extravagance without discouraging initiative on the other.

CONFEREES

ALASKA
- Mike Cline

ARIZONA
- W. Paul Norris

CALIFORNIA
- Vincent Amendola
- Corwin E. Barfield
- David H. Benson
- Ray Bernauer
- Perry F. Bosworth
- Jeannine DeMatteis
- A. W. Ehrhorn
- Gerald Erickson
- John H. French
- Frank Ginelli
- Linwood E. Howe, Jr.
- Noel N. Hubber
- Ralph A. Johnston
- Matt Krier
- John C. Mann
- John Matthews
- Minerva Mazuran
- George E. Meline
- John D. Meyer
- W. Edwin Mitchell
- John Moiso
- Arthur E. Owen
- George J. Paulus
- Frank R. Perl
- John T. Pomeroy
- Helen Raiskin
- Irving Rector
- Lucile T. Rodriguez
- Edward W. Solomon
- John Trittipo
- G. S. Valencia
- Denzil E. Widel

CANADA
- David Eugene Cooney
- John E. Holden
- Ying L. K. Hope
- A. T. Linden
- R. Harvey Self
- Arthur Tremblay
- Allan B. Wilson

DISTRICT OF COLUMBIA
- Michael Russo

GERMANY
- Warren Ruppel

HAWAII
- Herbert S. Watanabe

IDAHO
- Verne A. Duncan
- Charles W. Johnston

MICHIGAN
- Clyde H. Glazer
- Leif A. Hougen
- Verne M. Primack
- A. Mills Wilber

MINNESOTA
- Jack Lown
- Robert H. Norman

MISSOURI
- Warren M. Brown
- David L. March

MONTANA
- Karl D. Bell
- William S. Elliott

NEVADA
- Lewis H. Polizzi

NEW JERSEY
- Robert W. Blanchard

NEW MEXICO
- Charles R. Lugton
- Alfred R. Millington

OHIO
- Laurence R. Cramer
- Dorothy E. Shaffer

OREGON
- D. H. Drynan
- W. E. Huffstutter
- A. W. Nelson
- W. A. Oliver
- Laurence Perkins
- Tom Powers
- Robert C. Stearns

PENNSYLVANIA
- Walter E. Arrison
- William M. Conron, Jr.
- Michael P. Marcase

TEXAS
- Marvin Boland
- Glenn F. Fletcher

UTAH
- J. Lloyd Callister
- A. Maurice Capson
- Carl R. Evans
- M. E. Harris, Jr.
- J. Grant Kilfoyle
- Virginia Merrill
- Fred Montmorency
- Marcus Sorenson

WASHINGTON
- Harry W. Berry
- Paul L. Buhrmester
- R. M. Courtwright
- Erving E. Easton
- Kenneth A. Johnston
- Don Langert
- Elmer C. Lindquist
- Fred Messmer
- Mrs. Fred Messmer
- Verlan Pinson
- Glen Robert Webber
- Victor L. Wulff

WISCONSIN
- Mel Thomas

EDUCATIONAL FACILITIES LABORATORIES

Harold B. Gores, *President*
Jonathan King, *Secretary and Treasurer*

Photographs by Rondal Partridge

PARTICIPANTS

Christopher Arnold
Architect, SCSD

Paul Avery, Superintendent
Winnetka School District
Winnetka, Illinois

John R. Boice
Assistant Director
School Planning Laboratory

A. Maurice Capson
Supervisor, Facilities and Special Services
Granite School District
Salt Lake City, Utah

Marie De Carlo, Principal
Bushey Drive Elementary School
Rockville, Maryland

Clair Eatough, Senior Architect
California Bureau of School Planning

Ezra Ehrenkrantz
Project Architect, SCSD

Gerald Erickson, Architect
San Jose, California

Lucille C. Foster
Assistant Superintendent
Laguna Salada School District
Pacifica, California

Charles D. Gibson, Chief
California Bureau of School Planning

Harold B. Gores, President
Educational Facilities Laboratories
New York

Jan Goss, Principal
Dilworth Elementary School
Cupertino, California

M. E. Harris, Jr., Architect
Salt Lake City, Utah

Leonard Herman, Superintendent
Oak Grove School District
San Jose, California

Paul DeHart Hurd
Professor of Education
Stanford University

James D. MacConnell, Director
School Planning Laboratory

Boyd Morningstar, Principal
George Miner Elementary School
San Jose, California

Edwin J. Myers, Architect
Cupertino, California

Leland B. Newcomer, Superintendent
Clark County School District
Las Vegas, Nevada

James Orsburn
Field Representative
California Bureau of School Planning

Cal Porter, Architect
San Jose, California

I. James Quillen
Dean, School of Education
Stanford University

John Lyon Reid, Architect
San Francisco

Daniel J. Rolfs
Stanford University Planning Office

Roy H. Seifert, Landscape Architect
San Diego

John Shaver, Architect
Salina, Kansas

Fannie B. Shaftel
Associate Professor of Education
Stanford University

G. Wesley Sowards
Associate Professor of Education
Stanford University

Miriam Swett, Principal
Fairmont Elementary School
Pacifica, California

Marvin B. Wampler
Director of School Facilities
Clark County School District
Las Vegas, Nevada

SCHOOL PLANNING LABORATORY

James D. MacConnell, *Director*
Donald L. Davis, *Associate Director*
John R. Boice, *Associate Director*
Robert G. Lamp, *Research Associate*
William J. Hein, *Research Associate*
Arden Smith, *Research Associate*
Robert H. Bergquist, *Editorial Associate*
Roger R. Williams, *Editorial Assistant*
James L. Pritchard, *Research Assistant*
Edward C. McFadden, *Research Assistant*
Neal Casey, *Research Assistant*
Verne Feiock, *Research Assistant*
Edwin T. Rois, *Research Assistant*
Sterling Rigby, *Institute Coordinator*

AN EFL/SPL REPORT Educational Facilities Laboratories, Inc., is a nonprofit corporation established in 1958 by the Ford Foundation to help American schools and colleges with their physical problems by encouraging research and experimentation and disseminating knowledge regarding educational facilities. The School Planning Laboratory serves as Educational Facilities Laboratories' Western Regional Center and assists in activities related to the western states. For a list of EFL/SPL publications, write to the School Planning Laboratory, School of Education, Stanford University, Stanford, California 94305.